<!--StartFragment-->ADS63355 standard; cDNA; 2382 BP.
XX
AC ADS63355;
XX
DT 02-DEC-2004 (first entry)
XX
DE Bacterial polynucleotide #15342.
XX
KW Recombinant DNA construct; transformed plant; improved plant property;
KW cold tolerance; heat tolerance; drought tolerance; herbicide; osmosis;
KW pathogen tolerance; pest tolerance; plant disease resistance;
KW cell cycle pathway modification; plant growth regulator;
KW homologous recombination; seed oil yield; protein yield; carbohydrate;
KW nitrogen; phosphorus; photosynthesis; lignin; galactomannan;
KW bacterial polynucleotide; gene; ss.
XX
OS Bacteria.
XX
PN US2003233675-A1.
XX
PD 18-DEC-2003.
XX
PF 20-FEB-2003; 2003US-00369493.
XX
PR 21-FEB-2002; 2002US-0360039P.
XX
PA (CAOY/) CAO Y.
PA (HINK/) HINKLE G J.
PA (SLAT/) SLATER S C.
PA (CHEN/) CHEN X.
PA (GOLD/) GOLDMAN B S.
XX
PI Cao Y, Hinkle GJ, Slater SC, Chen X, Goldman BS;
XX
DR WPI; 2004-061375/06.
XX
PT New recombinant DNA construct comprising a promoter positioned to provide
PT for expression of a polynucleotide encoding a polypeptide from a
PT microbial source, useful for producing plants with improved properties.
XX
PS Claim 1; SEQ ID NO 39029; 122pp; English.
XX
CC The invention relates to a recombinant DNA construct comprising a
CC promoter functional in a plant cell, where the promoter is positioned to
CC provide for expression of a polynucleotide encoding a polypeptide from a
CC microbial source. The invention also relates to a transformed plant
CC comprising the recombinant DNA construct and a method of producing a
CC transformed plant having an improved property. The plant is a crop plant
CC such as maize or soybean. The method of producing a transformed plant
CC having an improved property comprises transforming a plant with the
CC recombinant DNA construct and growing the transformed plant, where the
CC polynucleotide or polypeptide is useful for improving plant properties.
CC The recombinant DNA construct is useful for producing plants with
CC improved plant properties, e.g. improved cold, heat or drought tolerance,
CC tolerance to herbicides, extreme osmotic conditions, pathogens or pests,
CC increased resistance to plant disease, better growth rate by modification
CC of the cell cycle pathway with plant growth regulators, increased rate of
CC homologous recombination, modified seed oil or protein yield and/or
CC content, improved yield by modification of carbohydrate, nitrogen or
CC phosphorus use and/or uptake, by modification of photosynthesis or by
CC providing improved plant growth and development under at least one stress
CC condition, improved lignin production or improved galactomannan
CC production. This sequence represents a bacterial polynucleotide used in
CC the scope of the invention. Note: The sequence data for this patent did
CC not form part of the printed specification but was obtained in electronic
CC format from USPTO at seqdata.uspto.gov/sequence.html.
XX
SQ Sequence 2382 BP; 463 A; 715 C; 783 G; 421 T; 0 U; 0 Other;

Query Match 88.2%; Score 2319.6; DB 12; Length 2382;
Best Local Similarity 98.4%; Pred. No. 0;
Matches 2343; Conservative 0; Mismatches 39; Indels 0; Gaps 0;

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Qy        189 GGAGCATCGCGCTTGAACGAGAATATCCTGTGGTTGCATGAGCTACGCCTGGTCGATCTG 248
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 GGAGCATCGCGCTTGAACGAGAATATCCTGTGGTTGCATGAGCTACGCCTGGTCGATCTG 60
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Qy        249 GCCCGCGTAGGCGGTAAAAATTCCTCGCTCGGCGAGATGATCGGCAACCTGGCCGGGTTG 308
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GCCCGCGTAGGCGGTAAAAATTCCTCGCTCGGCGAGATGATCGGCAACCTGGCCGGGTTG 120

Qy        309 GGCGTTTCGGTTCCCGGTGGATATGCGACCACTGCCGAAGCATTCAAGGACTTCATCGCG 368
              || ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 GGTGTTTCGGTTCCCGGTGGATATGCGACCACTGCCGAAGCATTCAAGGACTTCATCGCG 180

Qy        369 CACAACGATCTGTCAAAGCGCATTTTCGACAAGCTGGAGACGCTGGACGTTGAAGACGTC 428
              ||||||||||||||| || ||||||||||||||||||||||||||||||||||||||||||||
Db        181 CACAACGATCTGTCCAAACGCATTTTCGACAAGCTGGAGACGCTGGACGTTGAAGACGTC 240

Qy        429 ACCGCGCTCACGGTCGCCGGCAAGGAGATCCGCGGCTGGGTGATCGACGCCCCGCTGCAG 488
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Qy        489 CCGGAGCTGGACCGCGACATCCGCAGCGCCTACGAAAAACTCTGCGCCGAGAACGGCGGC 548
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Db        301 CCGGAGCTGGACCGCGACATCCGCAGCGCCTACGAAAAACTCTGCGCCGAGAACGGCGGC 360

Qy        549 GGCGAAGTGGCCGTGGCTGTGCGTTCGTCGGCAACCGCCGAAGACCTGCCCGATGCCTCG 608
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Qy        609 TTCGCCGGCCAGCAGGAAACCTTCCTCAATGTGACCGGCGCCGACGACGTGGTGCACAAG 668
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 TTCGCCGGCCAGCAGGAAACCTTCCTCAATGTGACCGGCGCCGACGACGTGGTGCACAAG 480

Qy        669 GTCAAGGAAGTATTCGCCAGCCTCTACAACGACCGCGCGATTGCCTACCGCGTGCACCAC 728
              |||||||||| || ||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 GTCAAGGAAGTGTTAGCCAGCCTCTACAACGACCGCGCGATTGCCTACCGCGTGCACCAC 540

Qy        729 GGCTTCAAGCACGAAGATGTGTTCCTGTCGGCCGGCGTGCAGTTGATGGTGCGCTCCGGC 788
              |||||||||||||||||||||||||||||||| ||||||||||||||||||||||||||||
Db        541 GGCTTCAAGCACGAAGATGTGTTCCTGTCGGCCGGTGTGCAGTTGATGGTGCGCTCCGGC 600

Qy        789 GTGGGTTCGTCCGGCGTGTTGTTCACCCTGGACACCGAGTCCGGCTTCCGCGACGTGGTG 848
              |||||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
Db        601 GTGGGTTCGTCCGGTGTGTTGTTCACCCTGGACACCGAGTCCGGCTTCCGCGACGTGGTG 660

Qy        849 TTCGTCACCTCCAGCTTCGGCCTGGGCGAAATGGTCGTGCAAGGCGCGGTCAATCCGGAC 908
              ||||| |||||||||||| ||||||||||||||||||||||||||||||||||||||||||||
Db        661 TTCGTGACCTCCAGCTTTGGCCTGGGCGAAATGGTCGTGCAAGGCGCGGTCAATCCGGAC 720

Qy        909 GAGTTCTACGTCTACAAGCCCACGCTCACTGCGGGCAAGCCGGCAATCCTGCGCCGCTCG 968
              || ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        721 GAATTCTACGTCTACAAGCCCACGCTCACTGCGGGCAAGCCGGCAATCCTGCGCCGCTCG 780

Qy        969 CTCGGCAGCAAGGCAATCCGCATGGTGTATTCGGATGTGCCCGGTGAACGCGTGCGCATC 1028
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Db        781 CTCGGCAGCAAGGCGATCCGCATGGTGTATTCGGATGTGCCCGGTGAACGCGTGCGCATC 840

Qy       1029 GAAGACACGCCGGTGGAGTTGCGCAACACTTTCTCGATCAGCGACGAAGATGTGCAGGAG 1088
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Qy       1089 CTCTCCAAGCAGGCGCTGGTGATCGAAAAGCATTACGGCCGCCCGATGGATATCGAGTGG 1148
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Db        901 CTCTCCAAGCAGGCGCTGGTGATCGAAAAGCATTACGGCCGCCCGATGGATATCGAGTGG 960

Qy       1149 GCCAAGGACGGCGTGAGCGGCAAGCTGTTCATCGTGCAGGCGCGCCCGGAGACGGTGAAG 1208
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Db        961 GCCAAGGACGGCGTGAGCGGCAAGCTGTTCATCGTGCAGGCACGCCCGGAAACGGTGAAG 1020

Qy       1209 TCGCGCAGCCATGCCACCCAGATCGAGCGTTTCTCGCTGGAAGCCAAGGACGCCAAGATC 1268
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Db       1021 TCGCGCAGCCATGCCACCCAGATCGAGCGTTTCTCGCTGGAAGCCAAGGATGCCAAGATC 1080

Qy       1269 CTGGTCGAAGGCCGTGCGGTTGGCGCCAAGATCGGCAGCGGCGTGGCACGCGTGGTGCGC 1328
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Qy       1329 TCGCTGGAAGACATGAATCGCGTGCAGGCCGGCGACGTGCTGATTGCCGACATGACCGAC 1388
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Db       1141 TCGCTGGAAGACATGAACCGCGTGCAGGCGGGCGACGTGCTGATTGCCGACATGACCGAC 1200
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Qy       1389 CCCGATTGGGAGCCGGTGATGAAGCGTGCCTCGGCCATCGTCACCAACCGCGGTGGCCGC 1448
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Db       1201 CCCGATTGGGAGCCGGTGATGAAGCGTGCCTCGGCCATCGTCACCAACCGCGGTGGCCGC 1260

Qy       1449 ACCTGCCACGCGGCGATCATCGCGCGCGAACTGGGCGTGCCGGCGGTGGTGGGTTCGGGC 1508
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Db       1261 ACCTGCCACGCGGCGATCATCGCGCGCGAACTGGGCGTGCCGGCGGTGGTGGGTTCGGGC 1320

Qy       1509 AATGCGACCGACGTCATCAGCGACGGCCAGGAAGTCACCGTGAGCTGCGCCGAGGGCGAC 1568
             ||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||||||
Db       1321 AATGCGACCGACGTGATCAGCGACGGCCAGGAAGTCACCGTGAGCTGCGCCGAGGGCGAC 1380

Qy       1569 ACCGGCTTCATCTATGAAGGCTTGCTGCCGTTCGAGCGCACCACCACCGACCTGGGCAAC 1628
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Db       1381 ACCGGCTTCATCTATGAAGGCTTGCTGCCGTTCGAGCGCACCACCACCGACTTGGGCAAC 1440

Qy       1629 ATGCCGCCTGCCCCGCTCAAGATCATGATGAACGTGGCCAACCCGGAGCGCGCATTCGAC 1688
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Qy       1809 AAGAAGATCGACGCCAAGATTGCCGGCTACGGCGACCCGGTGAGCTTCTACATCAACCGC 1868
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Qy       1869 CTGGCCGAAGGCATCGCGACCCTGACCGCGTCGGTGGCGCCGAACACGGTGATCGTGCGG 1928
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Qy       1929 TTGTCGGACTTCAAGTCCAACGAATACGCCAACCTGATCGGTGGCTCGCGTTACGAGCCG 1988
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Qy       1989 CACGAAGAGAACCCGATGATCGGCTTCCGCGGCGCCAGCCGTTATGTCGATCCGTCCTTC 2048
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Qy       2049 ACCAAGGCGTTCTCGCTGGAGTGCAAGGCGGTGTTGAAGGTGCGCAACGAGATGGGCCTG 2108
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Db       1861 ACCAAGGCGTTCTCGCTGGAGTGCAAGGCGGTGTTGAAGGTGCGCAACGAGATGGGCCTG 1920

Qy       2109 GACAACCTCTGGGTCATGATTCCGTTCGTGCGCACGCTGGAGGAAGGCCGCAAGGTGATC 2168
             |||||||| |||||||||||||||||| |||||||||||||||||||||||||||||||||||
Db       1921 GACAACCTTTGGGTCATGATTCCGTTCGTACGCACGCTGGAGGAAGGCCGCAAGGTGATC 1980

Qy       2169 GAGGTGTTGGAGCAGAACGGGCTCAAACAAGGCGAGAACGGGCTGAAGATCATCATGATG 2228
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Db       1981 GAGGTGCTGGAGCAGAACGGGCTCAAGCAAGGCGAGAATGGGCTGAAGATCATCATGATG 2040

Qy       2229 TGCGAGCTGCCGTCCAATGCGCTGCTGGCCGATGAGTTCCTGGAGATCTTCGACGGCTTC 2288
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Qy       2289 TCGATCGGCTCCAACGACCTGACCCAGCTCACCCTGGGCCTGGACCGCGATTCCTCGATC 2348
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Qy       2349 GTGGCGCACCTGTTCGACGAGCGGAACCCGGCGGTGAAAAAGCTGCTGTCGATGGCGATC 2408
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Db       2281 CCGGAACTGGCCGAGTGGTTGATGCAGGAAGGCATCGAGTCGGTGTCGCTGAATCCTGAC 2340
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Qy       2529 ACCGTGGTCGATACCTGGCTGCGCCTGGCCAAGCTCAAGAGC 2570
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